Greenhouse Gas Accounting Rules and Guidelines for Forest Systems

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Background

On February 14, 2002, the President announced his Climate Change Initiative that included improvements to the existing Department of Energy's Voluntary Greenhouse Gas Reporting Program. As part of this proposal, the President directed USDA to develop accounting rules and guidelines for crediting forestry and agriculture sequestration projects, in consultation with DOE and EPA and taking into account emerging domestic and international approaches.

The Forest Service is the lead agency in developing greenhouse gas accounting rules and guidelines for forest systems. This effort is being led by Dr. Richard Birdsey and a team of scientists from FS R&D and involves National Forest System, State & Private Forestry, other federal agencies, states, universities, and other groups. The rules and guidelines must be based on solid scientific and technical work to be credible and will be used extensively as a basis for crediting forestry activities.

On January 23, USDA held a public meeting to solicit input on the greenhouse gas accounting rules and guidelines for forestry that will be used in the voluntary greenhouse gas reporting system. There were over 70 participants representing federal and state agencies, NGO's, private landowners, and forest industry.

Goal

The broad purpose of this project is to develop accounting rules and guidelines for forest carbon sequestration projects. Rules, guidelines, and reporting forms will be developed for use in all regions of the U.S.

Approach

Broad participation by scientists, practitioners, land owners, and other forestry experts is required to identify, evaluate, and provide guidance for monitoring and reporting for the different kinds carbon sequestration activities, both nationally and for different regions of the U.S. Broad participation will also enhance the credibility of the final products.

This project will require a combination of new funding and the effort of Forest Service personnel through "special assignments". Successful completion of this Presidential assignment requires the full support of the Agency. The short timeline and public nature of this project indicate that an extraordinary effort will be required of all participants.

Products will include options and methods to estimate carbon credits. The carbon estimation options range from simple to complex, and vary in their application and degree of uncertainty. Work needed is:

- Developing consistent national rules and guidelines for reporting sequestration projects
- Compiling forest carbon sequestration estimates
  - from inventory data
  - from simulation models
  - from experimental research and demonstration studies
- Providing technical guidelines for carbon measurements
- Developing software to aid in computation and reporting

Timeline

- Complete work plan by September, 2002
- Public review of Work Plan and key issues – January 2002
- Draft guidelines – July 2003
- Public review of guidelines – October 2003
- Final guidelines – January 2004
- Forms, instructions, and software – June 2004

Critical Forest Sector Contributions to Carbon Sequestration and Emissions Reductions

Forestry presents some unique challenges and opportunities because of the diversity of operations (e.g. size and location of operations), the variety of practices that can address greenhouse gases, and year-to-year variability in emissions and sequestration associated with forest activities. The types of potential activities include:

- Increasing the amount of afforestation and reforestation.
- Reducing greenhouse gas emissions directly by changing current production practices. Examples of these activities include improving fuel economy in harvesting and transportation operations, changing fertilizer application practices, and changing wood production and processing technology. Note, the accounting rules and guidelines for many emissions reduction activities are not covered under the forestry accounting rules and guidelines, but are covered in other sections of the accounting rules and guidelines.
- Conserving existing carbon pools (e.g., low impact harvesting, maintaining forest preservation areas) and therefore preventing the release of carbon into the atmosphere.
- Sequestering carbon in soils, biomass, and wood products (e.g., enhanced land management, increased forest productivity, improved utilization, agro-forestry). Carbon sequestration reduces the amount of carbon in the atmosphere by increasing the amount of carbon stored in terrestrial ecosystems and wood products.
- Substituting bio-based products for fossil-fuel intensive/high emission products and fossil fuels (e.g., biofuels for gasoline and diesel fuels). Note, the accounting rules

and guidelines for biofuels are not covered under the forestry guidelines, but are covered in other sections of the accounting rules and guidelines.

- Increasing the proportion and retention of carbon in durable wood products. This avoids release of carbon as products are discarded and decompose, and can reduce the need for new timber harvesting for replacement products.